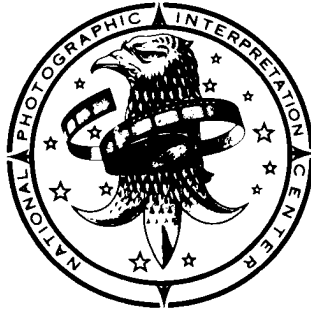


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Summary Report

NATIONAL PHOTOGRAPHIC
INTERPRETATION CENTER

STATIC TESTING OF MOTORS AT PAVLOGRAD SOLID MOTOR TEST FACILITY, USSR (S)

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SR-046//77

JULY 1977

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STATIC TESTING OF MOTORS AT PAVLOGRAD SOLID MOTOR TEST FACILITY, USSR (S)

(TSR) Evidence of a series of static tests on at least four different ICBM-sized motors was observed at the Pavlograd Solid Motor Test Facility [REDACTED]

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[REDACTED] The test facility was imaged six times during this reporting period. Static test preparations and results of static tests were observed on three of these six coverages. Five rocket motors/shipping containers (some probable) and two probable expended motors were seen. These motors/containers varied in length [REDACTED] Their diameters, when mensurable [REDACTED] Table 1 lists dimensions of these motor/containers and summarizes the activity observed on each coverage.

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(TSR) [REDACTED] The results of recent static test activity were identified [REDACTED] when a large blast mark and a probable expended motor were seen at the test facility. The large blast mark extended 370 meters from the thrust block and was 95 meters at its widest point (Figure 1). This blast mark was not present in October 1976. The probable expended motor (Figure 2) was [REDACTED]

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[REDACTED] It was on the ground between the horizontal test position and the unidentified test apparatus in an area where other expended motors have previously been seen (Figure 2). This expended motor was not present in October 1976. Motors up to this size have not been seen at the test facility since October 1975. These motors approximate the projected size of the first stage of the 15ZH43, a fifth-generation solid-propellant ICBM under development.*

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(TSR) Preparations for at least one static test (and possibly a second) were also observed on [REDACTED] when a motor/container was observed in front of the thrust block and a second motor/container was observed on a dolly at the entrance to the test position (Figure 2). The first motor/container [REDACTED] A possible end cap or nozzle, 0.8 meter long, was attached to the end of this motor/container; a large crane was next to this motor/container. The second motor/container [REDACTED] End caps were attached to both ends of the second motor/container. [REDACTED]

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(TSR) Scattered clouds and haze prevented a detailed analysis of the facility [REDACTED] when a possible motor/container was observed near the thrust block. This possible motor/container could not be measured accurately.

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(TSR) A static test probably occurred [REDACTED]. A probable expended motor was observed on a lowboy trailer next to the thrust block [REDACTED]. The motor [REDACTED]. The diameter was not mensurable because of contrast. Tiedown rings were positioned in front of the thrust block and a large crane was in front of the tiedown rings. The crane probably removed the motor from the tiedown rings and placed it into the trailer. Motors are usually brought to the test position on dollies. The presence of a motor on a lowboy trailer with nozzle attached probably indicates posttest activity. This probable expended motor was not present [REDACTED]

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(TSR) A cylindrical object, [REDACTED] was also observed mounted in cradles on top of one thrust block support [REDACTED]. Other unidentified objects, bracketing devices, and holddown structures have been seen mounted on top of the thrust block supports during previous static test activity. The positioning of this cylindrical object, mounted on top of the thrust block support [REDACTED] may indicate instrumentation for monitoring static tests or possibly tankage used to inject fluid into the exhaust stream during testing to control the thrust vector.

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(TSR) A probable motor/container, [REDACTED] was seen on a dolly near the thrust block [REDACTED]. This probable motor/container was not present [REDACTED] when new test preparations were observed. A motor, [REDACTED] [REDACTED] was mounted in the tiedown rings in front of the thrust block and a large crane was near this motor (Figure 4). The motor had been removed [REDACTED]

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(TSR) The cylindrical object which was first observed mounted on top of the thrust block support [REDACTED] remained in place through [REDACTED] it had been removed from the top of the thrust block support and was observed on a dolly near the entrance to the test position (Figure 5). A large crane was facing the dolly. The removal of the object from the top of the thrust block support may indicate an end to the test series.

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(TSR) Another cylinder [REDACTED] was observed on a low-boy trailer near the concrete apron of the unidentified test apparatus on [REDACTED] and was still [REDACTED]. This cylinder may have been either a motor or a container for a motor.

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*DIA, DI-410-3A-74-SSO, *Foreign Missile Production (FOMP) Communist World*, Jul 74 (TOP SECRET) [REDACTED]

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Table 1. Observations at Pavlograd Solid Motor Test Facility
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Item	Remarks
Blast mark	Longest blast mark observed to date
Motor/container	Test preparations (unid object not present)
Motor/container	At entrance to test position
Prob expended motor	Prob 1st stage 15ZH43
Poss motor/container	Near thrust block; not measurable
Prob expended motor	On lowboy trailer; diameter not measurable
Cylindrical object	Mounted on top thrust block support
Cylinder	Near unid test apparatus
Prob motor/container	Near thrust block
Motor	Test preparations (cylindrical object present)
Cylindrical object	Object removed from thrust block support

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List of Conversion Factors by Classification

UNITS OF LENGTH

<i>IF YOU HAVE</i>	<i>MULTIPLY BY</i>	<i>TO OBTAIN</i>
MILLIMETERS	0.0394	INCHES
CENTIMETERS	0.3937	INCHES
INCHES	25.4000	MILLIMETERS
INCHES	2.5400	CENTIMETERS
FEET	0.3048	METERS
FEET	0.0003	KILOMETERS
YARDS	0.9144	METERS
METERS	3.2808	FEET
METERS	0.0005	MILES(NAUTICAL)
METERS	1.0936	YARDS
KILOMETERS	3280.8400	FEET
KILOMETERS	0.6214	MILES(STATUTE)
KILOMETERS	0.5400	MILES(NAUTICAL)
MILES(STATUTE)	1.6093	KILOMETERS
MILES(NAUTICAL)	6076.1154	FEET
MILES(NAUTICAL)	1.8520	KILOMETERS
MILES(NAUTICAL)	1852.0000	METERS

UNITS OF MASS

<i>IF YOU HAVE</i>	<i>MULTIPLY BY</i>	<i>TO OBTAIN</i>
KILOGRAMS	2.2046	POUNDS(AVOIR.)
POUNDS(AVOIR.)	0.4536	KILOGRAMS
SHORT TONS	0.9072	METRIC TONS
METRIC TONS	1.1023	SHORT TONS
METRIC TONS	0.9842	LONG TONS
LONG TONS	1.0160	METRIC TONS

UNITS OF VOLUME

<i>IF YOU HAVE</i>	<i>MULTIPLY BY</i>	<i>TO OBTAIN</i>
LITERS	0.2642	GALLONS
LITERS	0.0063	BARRELS(POL)
LITERS	0.0010	CUBIC METERS
GALLONS	3.7854	LITERS
GALLONS	0.1337	CUBIC FEET
GALLONS	0.0238	BARRELS(POL)
GALLONS	0.0038	CUBIC METERS
BUSHELS	0.0352	CUBIC METERS
CUBIC FEET	7.4805	GALLONS
CUBIC FEET	0.1781	BARRELS(POL)
CUBIC FEET	0.0283	CUBIC METERS
CUBIC YARDS	0.7646	CUBIC METERS
BARRELS(POL)	158.9873	LITERS
BARRELS(POL)	42.0000	GALLONS
BARRELS(POL)	5.6146	CUBIC FEET
BARRELS(POL)	0.1590	CUBIC METERS
CUBIC METERS	1000.0000	LITERS
CUBIC METERS	264.1721	GALLONS
CUBIC METERS	35.3147	CUBIC FEET
CUBIC METERS	28.3776	BUSHELS
CUBIC METERS	6.2898	BARRELS(POL)
CUBIC METERS	1.3080	CUBIC YARDS

UNITS OF AREA

<i>IF YOU HAVE</i>	<i>MULTIPLY BY</i>	<i>TO OBTAIN</i>
SQUARE CENTIMETERS	0.1550	SQUARE INCHES
SQUARE INCHES	6.4516	SQUARE CENTIMETERS
SQUARE FEET	0.0929	SQUARE METERS
SQUARE YARDS	0.8361	SQUARE METERS
SQUARE METERS	10.7639	SQUARE FEET
SQUARE METERS	1.1960	SQUARE YARDS
SQUARE METERS	1.0000	CENTARES
SQUARE METERS	0.0002	ACRES
SQUARE METERS	0.0001	HECTARES
ACRES	4046.8564	SQUARE METERS
ACRES	0.4047	HECTARES
HECTARES	10000.0000	SQUARE METERS
HECTARES	2.4711	ACRES

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[REDACTED]

[REDACTED]

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